



# REVIVING THE DREAM

## ENGINEERING OPEN HOUSE 1989

MARCH 3 & 4, 1989

UNIVERSITY OF ILLINOIS  
AT URBANA-CHAMPAIGN



## INDEPENDENT SOCIETIES

ASSOC. OF MINORITY STUDENTS IN ENGR.  
Transportation Bldg.

ARMY CORPS OF ENGINEERS  
Kenney Gym

ASTRONOMY SOCIETY  
Loomis Lab Lobby

ENGINEERING FRESHMAN COMMITTEE  
Everitt Lab

ISHM  
Everitt Lab

SOCIETY OF CO-OPERATIVE ENGINEERS  
Mechanical Engineering Bldg.

SOCIETY OF WOMEN ENGINEERS  
Mechanical Engineering Bldg.  
Exhibit : The Athlete's Foot

SIGMA PHI DELTA  
Everitt Lab

TECHNOGRAPH  
Engineering Hall

TRIANGLE FRATERNITY  
Everitt Lab

TAU BETA PI  
Everitt Lab

## SPECIAL NOTES

CHEMISTRY MAGIC SHOW  
Room 100 Noyes Lab  
Friday, March 3  
11:00 AM & 2:00 PM  
Tickets may be purchased outside  
116 Roger Adams Lab.

## INDUSTRIAL EXHIBITS Kenney Gym

Amoco	IBM
Arthur Andersen	McDonnell-Douglas
Boeing	U.S. Dept. of Energy
Eastman Kodak	... and more!
Eli Lilly	

## CENTRAL EXHIBIT: *What's on the Horizon?* Loomis Lab

Exhibits from different fields of engineering will show what new advances are being made in engineering and what directions they will take in the future.

## KNIGHTS OF ST. PAT'S BALL

EOH culminates with St. Pat's Ball and Awards presentation at The Chancellor Hotel on Saturday evening. Tickets may be purchased at the Central Information Booth.

## PARKING INFORMATION

Free parking is available in the Southwest corner of the Assembly Hall parking lot. Shuttle buses will run continuously between the lot and engineering campus on both days.

## CONTESTS

Information on the following EOH contests is available at the Central Information Booth:

Supermarket Design Competition  
EOH Scavenger Hunt  
Paper Airplane Contest  
... and more!

## SPECIAL THANKS

Central Committee would like to extend special thanks to:

Anderson Consulting	Bertie Nelson
Dean Howard Wakeland	& all of our
Tom Glenn	committee members

## REVIVING THE DREAM

### WELCOME VISITORS!

Innovation, quality, and competitiveness are the ideals on which America was founded and now are at the center of today's debate on America's future. We have the opportunity for a renaissance of competitiveness in the marketplace because of technology advances in research, production, and manufacturing. The 1989 Engineering Open House demonstrates how engineers are at the center of this great change and the solutions they are discovering. We urge everyone to help us explore the opportunities that will once again make America competitive worldwide.

Enjoy your visit to the UIUC College of Engineering. We hope that when you leave EOH '89, you will take with you a new sense of curiosity and understanding of the world around you.

Bret Engelkemier  
Chairman, EOH '89

## EOH CENTRAL COMMITTEE

Alumni & Honored Guests:  
Awards:

Mike Kearney  
Bill Buttimer  
Tom Moran  
Dwight Roberts  
Karen Mitchell  
Jennifer Stofor  
Melissa Moore  
Eric Marsh  
John Marchelya  
Billie Dopudja  
Theresa Jordan  
Sonal Thakar  
Kurt Gruben

Central Exhibit:  
College Exhibits:  
Contests:  
External Publicity:  
Industrial Relations:  
Internal Publicity:  
Posters & Programs:  
Secretary-Treasurer:  
Traffic & Safety:

A special welcome is extended to the UIUC College of Engineering Alumni who are visiting EOH '89. Please stop by the Alumni Booth in Kenney Gym for information on special events that have been planned for alumni.



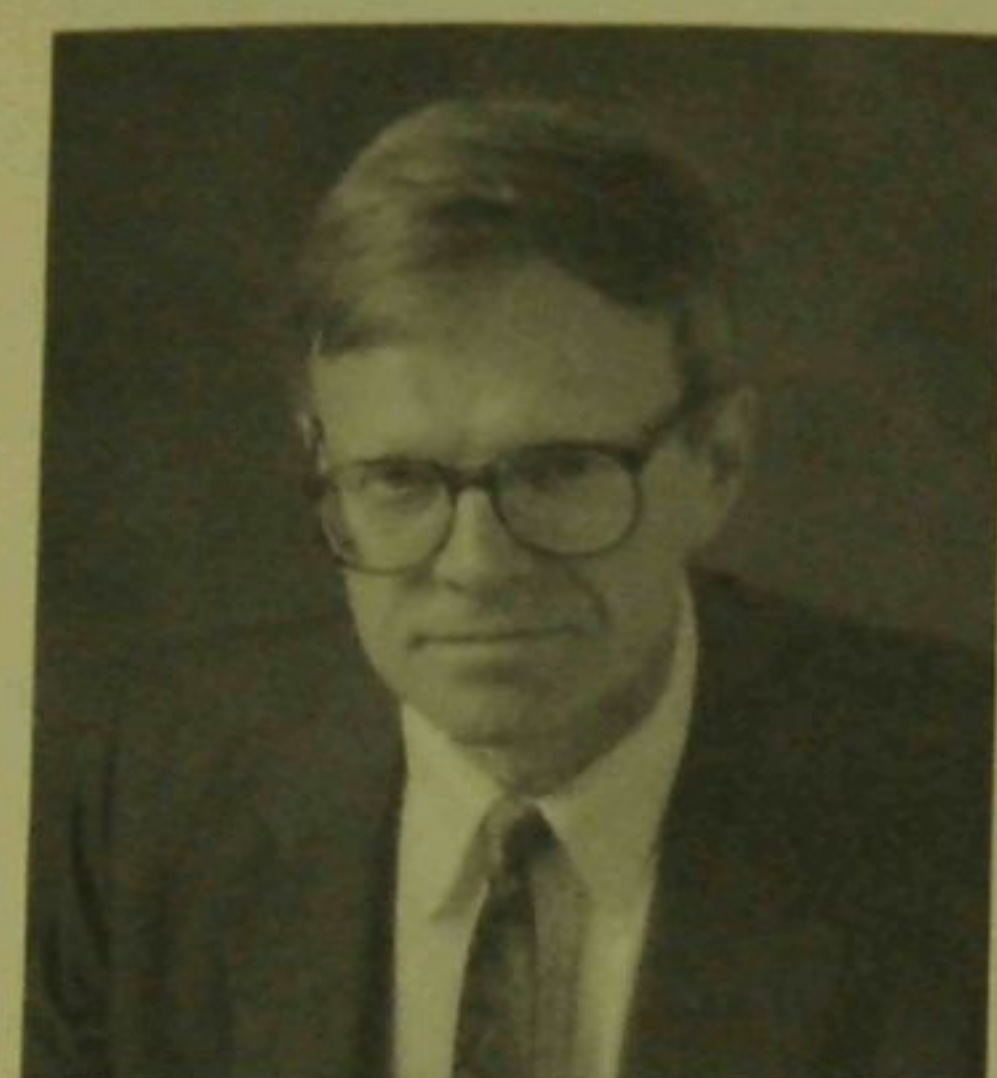
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## WELCOME TO EOH '89



As I begin my tenure in the position of dean of the College of Engineering it is a particular pleasure to welcome you to the Engineering Open House of 1989. This activity has a long and fruitful history at UIUC, and it represents the characteristics of excellence, dedication, and challenge that

were factors in my decision to join the institution this year.

Open House 1989 will focus on the role of engineering in recapturing those qualities that were once synonymous with American industry: innovation, quality, and competitiveness. The importance of a technically literate society and an adequate supply of properly educated engineers is now recognized as an essential ingredient for successful competition in worldwide markets for products, services, and ideas. It is a truly exciting time to be associated with engineering, and I believe that you will find some of that excitement during your participation in the Open House of 1989.

Dean W. R. Schowalter  
College of Engineering

## SPECIAL EXHIBITS

### DEPARTMENTS

#### AERONAUTICAL & ASTRONAUTICAL ENGINEERING

Woodshop and Aero. Lab B

#### AGRICULTURAL ENGINEERING

Ag. Engineering Science Bldg.

Exhibits Include:

ASAE: Why We're Successful  
Capacitive Coupling

Characterizing Corn Growth & Dev.  
Corn Seedling Emergence Modeling  
Detecting Stress Cracks on Corn Kernels  
Direct Combustion of Corn  
Dual Fueled Tractor  
Evaporative Cooling Pads  
Humidity Sensor Design  
Hydraulic Perf. of Concrete Block Chutes  
Hydraulic Sheep Shearing Machine  
Meas. of Fuel Droplets w/Laser Scanner  
Micro-Mini Tractor Pull  
Modeling of Pickle Texture  
The "Rambo Reaper"  
Testing Props. of Alternative Insulation

#### BIOENGINEERING

Everitt Lab

Transportation Bldg.

Coordinated Sciences Lab

Exhibits Include:

Computer Modeling of the Heartbeat  
Give Us a Break: Splint Technology Today  
Implantable Cardiac Defibrillator  
Measure Your Fencing Skills  
The Sound of Silence  
Ultrasonic Lithotripsy  
What You Can't Hear ... Can Hit You!

#### CERAMIC ENGINEERING

Ceramic Engineering Bldg.

Exhibits Include:

Ceramics On the Go  
Chemically Bonded Ceramics  
Electrical Ceramics  
Glass Panes: Do They Really Hurt?  
Refractories  
The Shaping of Ceramics Today

#### CHEMICAL ENGINEERING

Roger Adams Lab

Exhibits Include:

Beer Fermentation  
Computer Simulation of Flow Fields  
Hydraulic Jump

Materials Display  
Membranes  
Nylon Production  
Polymer Injection Molding  
Polyurethane Foam  
Soda Production

#### CIVIL ENGINEERING

Hydrosystems Lab

Newmark Civil Engineering Lab

Exhibits Include:

Concrete Corner  
Non-destructive Eval. of Masonry Bldgs.

#### COMPUTER SCIENCE ENGINEERING

Transportation Bldg.

Woodshop

Exhibits Include:

Dtroll: A Distributed Database System  
Multiplexing of Audio Signals  
The Choices Operating System

#### ELECTRICAL ENGINEERING

Everitt Lab

Exhibits Include:

Lasers

#### GENERAL ENGINEERING

Transportation Bldg.

Exhibits Include:

Auto CAD 3-d  
Bike Analysis  
Engr. Appl. During Structural Erections  
Fun with Physical Laws  
Mini-Sailboat Race  
Robot Vision  
Satellite Navigation  
Supermarket  
Voice-activated Elevator  
What Is General Engineering?  
Wheelchair Wheel

#### INDUSTRIAL ENGINEERING

Mechanical Engr. Bldg.

Exhibits Include:

Factory Simulation

#### MECHANICAL ENGINEERING

Mechanical Engr. Bldg.

Exhibits Include:

Egg Testing Machines  
Time and Time Again  
Unusual Experimental Bicycles

#### METALLURGICAL ENGINEERING

Metallurgy & Mining Bldg.

Exhibits Include:

Metallurgy at the UIUC  
Powder Metallurgy  
Spin-Casting Demonstration  
The American Steel Industry  
Superconductivity  
The Charpy Game  
Welding

#### NUCLEAR ENGINEERING

Coordinated Science Lab

Nuclear Research Lab

Nuclear Reactor Lab

Exhibits Include:

American Nuclear Society Student Chapter  
Environmental Monitoring  
HTR Modular Reactor  
Mag-Neat-O-Crusher  
Gamma Heating in a Fusion Blanket  
Neutron Activation Analysis  
The Risks of Indoor Radon Gas  
The Wasting of a Resource  
Understanding Radioactive Waste

#### PHYSICS ENGINEERING

Loomis Lab

#### THEORETICAL & APPLIED MECHANICS

Talbot Lab